

In re Application of: Jerry C. Anderson

Group Art Unit: 1771

Serial No.: 09/597,326

Examiner: U. Ruddock

Filed: June 19, 2000

Our Account No.: 04-1403

Confirmation No.: 4039

Title: AIRCRAFT INSULATION

Commissioner for Patents
U.S. Patent and Trademark Office
Washington, DC 20231



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RESPONSE

This is a response/amendment/letter in the above-identified application and includes the herewith attachment of same date and subject which is incorporated hereinto by reference and the signature below is to be treated as the signature to the attachment in absence of a signature thereto.

Fee requirements (if any) have been calculated as shown below:

	Claims remaining after amendment	Highest number previously paid for	Present Extra		Additional Fee
Total Effective Claims	32	33	= 0	x \$18 =	\$ 0.00
Independent Claims	3	3	= 0	x \$84 =	\$ 0.00
If amendment enters <u>proper</u> multiple dependent claim(s) into this application for <u>first</u> time, add \$270.00 (per application)					\$
Since Official Action set an <u>original</u> due date of N/A					\$
PETITION is hereby made for an extension to cover the date this response is filed for which the requisite fee is enclosed (1 month \$110; 2 months \$400; 3 months \$920; 4 months \$1440)					\$
If Terminal Disclaimer enclosed, add Rule 20(d) Official Fee (\$110.00)					\$
SUBTOTAL:					\$ 0.00
If "small entity" verified statement filed [] previously, [] herewith, enter one-half (½) of subtotal and <u>subtract</u>					\$
TOTAL:					\$ 0.00
Other: _____					\$
TOTAL FEE ENCLOSED:					\$ 0.00

The Commissioner is hereby authorized to charge any fee specifically authorized hereafter, or any fees in addition to the fee(s) filed, or asserted to be filed, or which should have been filed herewith or concerning any paper filed hereafter, and which may be required under Rules 16-18 (deficiency only) now or hereafter relative to this application and the resulting official document under Rule 20, or credit any overpayment, to our Account No. shown in the heading hereof for which purpose a duplicate copy of this sheet is attached. This statement does not authorize charge of the issue fee in this case.

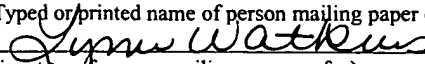
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DORITY & MANNING
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By Atty: Jason W. Johnston Reg. No.: 45,675

Signature: 

I hereby certify that this correspondence and any referenced attachment and fee are being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, U.S. Patent and Trademark Office, Washington, DC 20231, on January 7, 2003.

Lynn Watkins
(Typed or printed name of person mailing paper or fee)

(Signature of person mailing paper or fee)



PATENT
ATTORNEY DOCKET NO.: SCF-58

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application

Jerry C. Anderson

Serial No.: 09/597,326

Filed: June 19, 2000

Title: Aircraft Insulation

Commissioner for Patents
Washington, D.C. 20231

Examiner: U. Ruddock

Art Unit: 1771

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RESPONSE

Dear Sir:

In response to the Office Action dated October 7, 2002, favorable reconsideration and allowance of the present application is respectfully requested.

Currently, claims 1-24 and 34-41, including independent claims 1, 16, and 34 remain pending in the present application. Independent claim 1, for instance, is directed to an insulation blanket for providing thermal and noise insulation in the cabin of an aircraft. The insulation blanket comprises an insulation layer containing an insulation material positioned adjacent to a barrier layer containing a film attached to a scrim made from generally flame-retardant, textured yarns.

In the Office Action, independent claims 1, 16, and 34 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,054,710 to Botsolas in view of 3,991,549 to Heinrich, et al. Botsolas describes a flexible jacketed insulating blanket for covering and thermally insulating pipes and other equipment with surfaces that are flat or have simple curvature. (Col. 1, lines 58-61). The jacketed insulation

blanket includes, *inter alia*, a vapor barrier film, an inorganic fiber insulation layer, and a reinforcing fiberglass scrim cloth. (Col. 2 lines 6-15). For example, as shown in Fig. 2, a mass type insulation 9 is bonded to the uncoated face of a vapor barrier layer comprising polyester film 11 and an aluminum coating 12. The coating 12 is bonded by an adhesive 13 to a layer 14 of asbestos paper in which is embedded a reinforcing layer 15 of open mesh fiberglass scrim cloth. (Col 2, lines 40-67).

Applicant respectfully submits, however, that Botsolas fails to disclose various limitations of independent claims 1, 16, and 34. For example, Botsolas describes the use of a scrim cloth 15 that may be woven from polyethylene terephthalate or nylon threads, with fiberglass threads being usually preferable. (Col 5, lines 16-21). Botsolas explains the function of the scrim cloth 15 as follows:

For illustration, in the asbestos layer 14, the embedded glass fiber strands of scrim cloth 15 greatly reinforce the strength of the felted asbestos but the glass has a much lower melting point and flame resistance than asbestos; however, the asbestos covers and insulates the glass fibers, and this protection enables the glass fibers to maintain a substantial strengthening of the asbestos layer even when the surface temperatures of the outer face of the asbestos exceed the softening or melting temperature of the strengthening agent, the glass fibers. (Col 8, lines 15-25). (Emphasis added).

As evidenced from the above, the scrim cloth 15 has a relatively low flame resistance and is used primarily for reinforcement. The asbestos layer is required to impart the desired flame resistance. To the contrary, the yarns of the scrim in independent claims 1, 16, and 34 are generally flame retardant and textured and thus multi-functional, i.e., they facilitate flame resistance, as well as noise and thermal insulation. Such a scrim is simply not taught by Botsolas.

In the Office Action, Heinrich, et al. was also cited in combination with Botsolas in an attempt to achieve the limitations of independent claims 1, 16, and 34. Heinrich, et al. is directed to a process for preparing nontexturized filament yarns, wherein the filaments of the yarn show uniform characteristics over their length and may be worked up to fabrics having an extremely low tendency to pilling. (Col 2, lines 1-6). In the Office Action, it was stated that Heinrich, et al. disclosed texturized filament yarns that can be flame-proof or flame-retarding. It was suggested that one of ordinary skill in the art would have found it obvious to use such yarns in the insulating blanket of Botsolas.

However, even assuming *arguendo* that Heinrich, et al. describes texturized yarns that can be flame-proof or flame-retarding, no motivation would have existed to combine such yarns with the scrim cloth of Botsolas in the manner suggested in the Office Action. As indicated above, the fiberglass scrim cloth 15 of Botsolas functions to greatly reinforce the strength of the felted asbestos layer 14. In fact, Botsolas actually states the following:

Without reinforcing fiber glass threads, the binder resin in the asbestos paper would burn or decompose with a resulting loss of binding properties, and the asbestos paper would tend to collapse or tear as a result of the asbestos fibers falling apart at temperatures at which the combined glass fiber and asbestos layer described herein would retain its configuration and substantial strength from its intact glass strands embedded in shielding asbestos that is held together mainly by those glass strands. (Col 8, lines 29-32) (Emphasis added).

As evidenced by the passage above, there would simply have been no motivation for one of ordinary skill in the art to substitute the yarns of Heinrich, et al. for

the fiberglass scrim cloth 15 of Botsolas, particularly in view of the necessity of the fiberglass threads to the jacket construction of Botsolas.

Applicant also notes that independent claims 16 and 34 require an insulation layer sandwiched between a first barrier layer and a second barrier layer, wherein each barrier layer contains a film attached to a scrim. As correctly noted by the Examiner in the Office Action, Botsolas fails to disclose the teaching that there further comprises a second barrier layer adjacent to the insulation layer. Nonetheless, it was stated in the Office Action that such a layered construction would have been obvious because the "mere duplication of the essential working parts of a device only involves routine skill." However, Applicant notes that Botsolas indicates that the insulation material (i.e., strips 9) is placed in "direct contact" with pipe or other equipment surfaces to be covered with the composite jacketed insulation. (Col 7, lines 31-35). Based on such teachings, there is simply no indication that one of ordinary skill in the art would be motivated to sandwich the insulation layer between two barrier layers so that the insulation layer no longer directly contacts the surface to be covered. Thus, for at least the reasons set forth above, Applicant respectfully submits that independent claims 1, 16, and 34 patentably define over the references cited, taken singularly or in any proper combination.

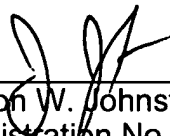
In addition, the above-cited references and U.S. Patent No. 4,452,848 to Geiger were also cited in various combinations to reject dependent claims 2-15, 17-24, and 35-41. Applicant respectfully submits, however, that at least for the reasons indicated above relating to independent claims 1, 16, and 34, claims 2-15, 17-24, and 35-41 patentably define over the references cited. However, Applicant also notes that the

patentability of dependent claims 2-15, 17-24, and 35-41 certainly does not necessarily hinge on the patentability of independent claims 1, 16, and 34. In particular, it is believed that these some or all of these claims possess features that are independently patentable, regardless of the patentability of claims 1, 16, and 34.

Thus, for at least the reasons set forth above, Applicant respectfully submits that the present claims patentably define over the prior art of record. It is believed that the present application is in complete condition for allowance and favorable action, therefore is requested. Examiner Ruddock is invited and encouraged to telephone the undersigned, however, should any issues remain after consideration of this response.

Please charge any additional fees required by this Response to Deposit Account No. 04-1403.

Respectfully submitted,
DORITY & MANNING, P.A.



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